

Listing of the Claims:

1. (Currently Amended) A method for a first process running on a computing device to communicate with a second process, the method comprising:
creating a process table on the computing device, wherein each process in the process table is associated with a process identifier that uniquely identifies the process;
rendering the process table accessible to the first process;
associating a Universally Unique Identifier (UUID) with the second process;
creating an entry for the second process in the process table;
associating the UUID of the second process with the process entry for the second process in the process table;
configuring the second process to respond to a global synchronization event by releasing resources, reporting status, and performing a controlled shutdown;
specifying a communications task to perform; and
using the UUID of the second process to specify that the communications task be performed with respect to the second process.

2. (Original) The method of claim 1 wherein creating a process table comprises creating the process table as shared memory on the computing device.

3. (Original) The method of claim 1 further comprising:

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

coordinating access to the process table and to the process entry for the second process via software locks.

4. (Original) The method of claim 1 wherein specifying a communications task to perform comprises specifying monitoring a process and wherein the method further comprises:

writing status information about the second process into the process entry for the second process; and

retrieving the status information about the second process by using the UUID of the second process to access the process entry for the second process in the process table.

5. (Original) The method of claim 4 wherein writing status information comprises periodically writing a heartbeat update time and wherein the method further comprises:

comparing the heartbeat update time in the status information to the current time; and

determining if the second process is running based on the comparing of the times.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

6. (Original) The method of claim 1 wherein specifying a communications task to perform comprises specifying requesting information from a process and wherein the method further comprises:

specifying a type of information requested; and
returning the information requested to the first process.

7. (Original) The method of claim 6 wherein the type of information requested is selected from the set: log output, console output.

8. (Original) The method of claim 6 further comprising:
specifying a period of time during which to return the information requested;
and
wherein returning comprises returning the information requested during the specified period of time.

9. (Original) The method of claim 6 wherein returning comprises returning the information requested until the first process indicates that the information need no longer be returned.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

10. (Original) The method of claim 1 wherein specifying a communications task to perform comprises specifying waiting for the second process to achieve a status.

11. (Original) The method of claim 10 wherein the status is in the set: initialized, debug_break, terminated.

12. (Original) The method of claim 1 wherein specifying a communications task to perform comprises specifying sending a signal to the second process.

13. (Original) The method of claim 12 wherein sending a signal indicates that the process should terminate.

14. (Original) The method of claim 1 further comprising:
associating a UUID with a third process;
creating an entry for the third process in the process table;
associating the UUID of the third process with the process entry for the third process in the process table;

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

associating the UUID of the second process with the process entry for the third process in the process table; and

using the UUID of the second process to specify that the communications task be performed with respect to the third process.

15. (Original) The method of claim 14 wherein the third process is a child of the second process.

16. (Original) The method of claim 15 further comprising using the UUID of the second process to specify that the communications task be performed with respect to all descendants of the second process.

17. (Original) The method of claim 1 wherein the second process runs on a second computing device distinct from the computing device on which the first process runs.

18. (Original) The method of claim 17 further comprising:

associating an identifier of the second computing device with the process entry for the second process in the process table;

creating a second process table on the second computing device;

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

creating an entry for the second process in the second process table; and
associating the UUID of the second process with the process entry for the second
process in the second process table.

19. (Original) The method of claim 18 wherein specifying a
communications task to perform comprises specifying monitoring a process and
wherein the method further comprises:

writing status information about the second process into the process entry for
the second process in the second process table; and
retrieving the status information about the second process by using the UUID of
the second process to access the process entry for the second process in the second
process table.

20. (Original) A computer-readable medium having instructions for
performing the method of claim 1.

21. (Currently Amended) A method for a first process running on a
computing device to communicate with a second process and with a third process, the
method comprising:

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

creating a process table on the computing device, wherein each process in the process table is associated with a process identifier that uniquely identifies the process;
rendering the process table accessible to the first process;
creating an entry for the second process in the process table;
creating an entry for the third process in the process table;
associating a group UUID with the process entry for the second process in the process table;
associating the group UUID with the process entry for the third process in the process table;
specifying a communications task to perform; and
using the group UUID to specify that the communications task be performed with respect to the second and third processes.

22. (Original) The method of claim 21 wherein creating a process table comprises creating the process table as shared memory on the computing device.

23. (Original) The method of claim 21 further comprising:
coordinating access to the process table and to the process entries for the second and third processes via software locks.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

24. (Original) The method of claim 21 wherein specifying a communications task to perform comprises specifying monitoring a process and wherein the method further comprises:

writing status information about the second process into the process entry for the second process;

writing status information about the third process into the process entry for the third process; and

retrieving the status information about the second and third processes by using the group UUID to access the process entries for the second and third processes in the process table.

25. (Original) The method of claim 24 wherein writing status information comprises periodically writing a heartbeat update time and wherein the method further comprises:

comparing the heartbeat update times in the status information to the current time; and

determining if the second and third processes are running based on the comparing of the times.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

26. (Original) The method of claim 21 wherein specifying a communications task to perform comprises specifying requesting information from a process and wherein the method further comprises:

specifying a type of information requested; and
returning the information requested to the first process.

27. (Original) The method of claim 26 wherein the type of information requested is selected from the set: log output, console output.

28. (Original) The method of claim 26 further comprising:
specifying a period of time during which to return the information requested;
and
wherein returning comprises returning the information requested during the specified period of time.

29. (Original) The method of claim 26 wherein returning comprises returning the information requested until the first process indicates that the information need no longer be returned.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

30. (Original) The method of claim 21 wherein specifying a communications task to perform comprises specifying waiting for the second process to achieve a status and the third process to achieve the status.

31. (Original) The method of claim 30 wherein the status is in the set: initialized, debug_break, terminated.

32. (Original) The method of claim 21 wherein specifying a communications task to perform comprises specifying waiting for the second process or the third process to achieve a status.

33. (Original) The method of claim 32 wherein the status is in the set: initialized, debug_break, terminated.

34. (Original) The method of claim 21 wherein specifying a communications task to perform comprises specifying sending a signal to the second and the third processes.

35. (Original) The method of claim 34 wherein sending a signal indicates that a process should terminate.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

36. (Original) The method of claim 21 wherein the second process runs on a second computing device distinct from the computing device on which the first process runs.

37. (Original) The method of claim 36 further comprising:

associating an identifier of the second computing device with the process entry for the second process in the process table;

creating a second process table on the second computing device;

creating an entry for the second process in the second process table; and

associating the group UUID with the process entry for the second process in the second process table.

38. (Original) The method of claim 37 wherein specifying a communications task to perform comprises specifying monitoring a process and wherein the method further comprises:

writing status information about the second process into the process entry for the second process in the second process table; and

retrieving the status information about the second process by using the group UUID to access the process entry for the second process in the second process table.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

39. (Original) A computer-readable medium having instructions for performing the method of claim 21.

40-65. (Cancelled)

66. (Currently Amended) A computer-readable medium having instructions for performing steps comprising:

executing a first process in a first computing device;
launching a second process in a second computing device, the second process being invoked by the first process;
identifying the second process in a shared memory included in the first computing device, the second process being identified in the shared memory with an identifier unique to the second process, the unique identifier being independent from the computing device on which the second process is running;
configuring the first process and the second process to communicate based, at least in part, on the information in the shared memory;
associating a global synchronization event with the second process; and
configuring the second process to respond to the global synchronization event by releasing resources, reporting status, and performing a controlled shutdown.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

67. (Previously Presented) The computer-readable medium as recited in claim 66, further comprising configuring the second process to periodically log heartbeat entries in the shared memory.

68. (Currently Amended) The computer-readable medium as recited in claim 67, further comprising configuring the first process to access the heartbeat entries logged by the second process in [[the]] a process table.

69. (Currently Amended) The computer-readable medium as recited in claim 66, further comprising:
associating a set of processes with [[an]] a parent identifier that identifies a parent process from which the processes in the set depend; and
in response to a termination of the parent process, canceling the processes identified by the parent identifier.

70. (Currently Amended) A computing device comprising:
means for executing local processes on the computing device;
means for launching remote processes invoked by the local processes on other remote computing devices;

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

means for maintaining a process table on the computing device that includes information about the local processes and the remote processes, wherein each process in the process table is associated with a process identifier that uniquely identifies the process;

means for identifying the local processes and the remote processes with identifiers that do not distinguish the remote processes from the local processes; means for enabling the remote processes to update the information in the process table; and

means for the local processes to access the updated information about the remote processes.

71. (Currently Amended) The computing device as recited in claim 70, further comprising means for associating a global synchronization event with each remote process.

72. (Currently Amended) The computing device as recited in claim 71, wherein the global synchronization event includes at least one of means for releasing resources, means for reporting status, and means for performing a controlled shutdown.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001

73. (Currently Amended) The computing device as recited in claim 70, further comprising:

means for defining global synchronization events associated with all of the remote processes identified in the process table; and
means for assigning meanings to the defined global synchronization events.

74. (Previously Presented) The computing device as recited in claim 70, wherein the information in the process table associated with each remote process includes at least one of a parent identifier, a group identifier, a creation time, a heartbeat time, a source device, a target device, or a process type.

Type of Response: Final Response
Application Number: 09/872,257
Attorney Docket Number: 160421.01
Filing Date: 06/01/2001